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Abstract

The essential purpose of this paper is to illustrate the value of the Teacher Classroom Activity Profile (TCAP) in identifying and classifying teaching roles and in providing information which, if subjected to careful analysis, can lead to more effective approaches to the problem of role differentiation in the secondary school classroom. The author briefly describes the observational procedures used in a TCAP-based study of 1,097 secondary student teachers and reports the results (percent of classroom time devoted to various categories of behavior) in tabular form. He then presents and discusses the implications of seven hypotheses suggested by a preliminary analysis of the data (based on the seven categories of activity identified by the TCAP--i.e., management-nonlearning, management-learning, presentation, recitation, discussion, logical thinking, and attention to the thinking process). The analysis includes specific suggestions as to the ways in which teaching roles can be more effectively assigned and training programs more appropriately designed. (JS)

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STUDYING TEACHER CLASSROOM BEHAVIOR TO DETERMINE HOW PARAPROFESSIONALS CAN HELP IN THE CLASSROOM

Donald M. Sharpe

A prior consideration to role differentiation should be role identification. Before specific roles can be assigned to aides, paraprofessionals, or professionals, teaching roles need to be carefully identified and classified. Instead of engaging in a philosophical discussion of possible teaching roles, I propose a careful look at what teachers do in the classroom.

Studies of how teachers spend their time suggest that too much of their school day is spent in nonprofessional or clerical pursuits. For example, a Virginia study *(9)* showed that elementary teachers "waste" about one and a half hours a day.

In considering the utilization of teacher aides and paraprofessionals, typically one thinks of their being employed in roles outside the classroom, such as supervising playgrounds, scoring tests, and performing clerical chores. Data being collected in an ongoing study *(7)* of student teacher assessment suggest that some of the typical class-

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room activities of a secondary school teacher could be delegated to another person or to a machine.

One of the assumptions of the movement to differentiate roles in education is that such differentiation will lead to more efficient utilization of professional personnel. There is some evidence, however, that this assumption is not supported by experience, that teachers who are relieved of routine chores simply increase the amount of time they spend in the coffee lounge. Plans for staff differentiation must focus on creative ways of using the time provided by the employment of paraprofessionals.

Other studies which have examined what teachers do in the classroom can provide insights into teaching roles and will prove helpful to persons interested in studying the teaching act: Withall *(10)*, Flanders *(3)*, and Amidon and Hunter *(1)* have measured interaction in the classroom. Smith *(8)* has analyzed the logical aspects of classroom discourse. Medley *(5)* and Mitzel *(6)* have made extensive measurements of teacher and student teacher classroom behavior. Hughes *(4)* developed instruments for assessing the quality of teaching in elementary schools. Bellack *(2)* has made a detailed analysis of the linguistic behavior of teachers and students in the classroom.

As one facet of a basic study of student teacher evaluation, my associates and I analyzed the way secondary student teachers spent their time when responsible for teaching a class. After several approaches, we found it possible to distribute their activities among the following categories: management of nonlearning activities (MN), management of learning activities (ML), presentation (P), recitation (R), discussion (D), logical thinking (LT), and attention to the thinking process (TP). See the Appendix

(pp. 13-19) for notes on the Teacher Classroom Activity Profile (TCAP), instructions for its use, a sample form, and a glossary of terms.

Obviously these categories permit only gross classification and are not mutually exclusive. However, a minimal amount of training does enable an observer to obtain a generalized picture of the teacher's or student teacher's classroom behavior.

A preliminary analysis of the results of 1,361 observations suggests some interesting hypotheses which are relevant to the problem of role differentiation in the secondary school classroom (see Table 1).

Student teachers were observed by two types of supervisors: members of the Indiana State University Division of Teaching who devote their full time to the supervision of student teaching, working with students in different teaching fields; and departmental supervisors who work with student teachers in their own particular disciplines. It should be noted that in only one category -- discussion -- was there any significant difference in their distribution of teacher classroom activities. Part of the variance could be due to different behaviors of student teachers and part could be due to different understandings of the unique definition of the term *discussion*. The high degree of agreement between the classifications made by departmental supervisors and divisional supervisors suggests that the TCAP can be used with a minimum of training.

Table 2 shows that there is a significant difference in the way teachers spend their classroom time in academic-type classes -- e.g., English, mathematics, social studies -- when contrasted with laboratory-type classes -- e.g., typing,

Table 1.--PERCENT OF CLASSROOM TIME DEVOTED TO VARIOUS CATEGORIES OF BEHAVIOR BY 1,097 SECONDARY STUDENT TEACHERS AS RECORDED BY DIVISION OF TEACHING SUPERVISORS AND BY 264 SECONDARY STUDENT TEACHERS AS RECORDED BY DEPARTMENTAL SUPERVISORS

Behavior	Percent of time (0 5 10 15 20 25 30)	
Management-Nonlearning Activities	■	5.10%
	|||||||	4.45
Management-Learning Activities	■■■

Table 2.--PERCENT OF CLASSROOM TIME DEVOTED TO VARIOUS CATEGORIES OF BEHAVIOR BY 736 SECONDARY STUDENT TEACHERS IN ACADEMIC-TYPE CLASSROOMS AND BY 625 SECONDARY STUDENT TEACHERS IN LABORATORY-TYPE CLASSROOMS

Behavior	Percent of Time (0 5 10 15 20 25 30)	
Management-Nonlearning Activities	■	3.58%
	▮▮▮▮▮▮▮▮	6.25
Management-Learning Activities	■■■■■■■■■■■■■■■■■■■■■■■■■■■■	28.42
	▮▮▮▮▮▮▮▮

physical education, music. (An analysis of variance showed that the differences (F scores) were significant at the .005 level for all categories of activity except management-learning. Space does not permit an analysis of these differences here.)

HYPOTHESIS NO. 1 RE: MANAGEMENT-NONLEARNING (MN)

If teachers spend large amounts of time on housekeeping chores, as is frequently alleged, this study does not provide such evidence. It would be difficult to justify a classroom aide purely on the grounds that he can relieve the teacher of such menial tasks as "collecting milk money," making announcements, and performing the necessary bureaucratic chores. It should be noted that this study made no attempt to classify teacher activity outside the classroom. It may be that the housekeeping chores which loom so large in popular discussion are peculiar to elementary schools or occur outside the classroom in secondary schools. Less than 5 percent of the time was spent on such chores. Also included in this category was time spent in disciplining and reprimanding students. Examination of the observers' notes shows that less than 1 percent of class time was spent reprimanding or disciplining students.

HYPOTHESIS NO. 2 RE: MANAGEMENT-LEARNING (ML)

For 28 percent of the classroom time, a technician, an aide, or a monitoring device could be as effective as a professional teacher. Student teachers spend this amount of time in a passive role of permitting students to learn rather than helping them learn. The teacher is simply managing the class while a film is being shown or monitoring

a test or permitting students to study. He plays no leadership or teaching role other than that of having planned the activity.

HYPOTHESIS NO. 3 RE: PRESENTATION (P)

If a teacher spends approximately 25 percent of his time in presentation and teaches the same class four times, it is possible that modern educational technology could relieve him of the equivalent of approximately one class period per day. A similar saving of time and energy might be made through flexible scheduling.

Student teachers spend less time than one would think in lecturing. The criticism of the lecture method as a teaching device may have had some effect in limiting this type of teacher activity. Approximately 25 percent, or 15 minutes, of each hour was spent in formal presentation in academic-type classes. Since time devoted to feedback and analytical discussion appears in another category -- logical thinking -- one could argue that presentations could be made by machines or lecturers in large groups. Most models of a differentiated staff provide for some such specialization on the assumption that it is more efficient to present a demonstration or lecture once to a large group of pupils than to repeat it several times to smaller groups. However, the problems of logistics and organization may reduce the advantage.

HYPOTHESIS NO. 4 RE: RECITATION (R)

Approximately one-fourth of a student teacher's class time is squandered in old-fashioned recitation -- terse

reporting of memorized data and oral testing -- even though the evidence is overwhelming that it is educationally and psychologically unsound. A restructuring of teaching roles and the improvement of teacher education could provide personnel skilled in interaction, reinforcing, and thinking who would completely eliminate recitation as here defined and replace it with logical thinking. When one adds the 25 percent of the time spent in recitation to the 15 percent wasted in discussion, as here defined, he becomes alarmed at the human wastage which occurs in the classroom.

HYPOTHESIS NO. 5 RE: DISCUSSION (D)

Too much of class time is spent in pointless talk and purposeless interaction. This hypothesis needs to be examined carefully and the findings subjected to replication. The Indiana State University observers found that approximately 15 percent of every hour was spent in random discussion, irrelevant talk, and pseudointellectual activity such as stream-of-consciousness interaction or words expressed without any apparent focus or purpose.

It is possible that this behavior is more characteristic of student teachers than of experienced teachers. It is possible that beginners are afraid of silence in a classroom and feel a compulsion to fill the silence with words, even though they may be purely irrelevant words. There is some evidence that this phenomenon is not limited to student teachers. It may be that the observers erred in categorizing the teacher's behavior because they were unable to determine his long-range plan or purpose. However, the observers were careful to shift the classification to logical thinking, recitation, or presentation whenever any "rhyme or reason" appeared in the "talk, talk, talk." Time

classified as discussion in this study was considered wasted time. This is not to denigrate the value of discussion but to emphasize that what masquerades as discussion is frequently not only time wasted but time that is actually miseducative.

The findings suggest the need for specific training in the use of discussion as an instructional technique.

HYPOTHESIS NO. 6 RE: LOGICAL THINKING (LT)

Far too little classroom time is devoted to thinking if one excludes the simpler types of mental activity of absorbing information and recalling specific facts. Only 9 percent of the time is spent in analyzing, synthesizing, reasoning, questioning conclusions, or creative thinking. Of course, staff differentiation will not automatically solve this problem. However, it could make possible the identification of teachers who are skilled in this pedagogical activity and permit them to share their talents with other members of the staff. Teacher educators must assume more responsibility for improving skills in logic, thinking, and problem solving.

HYPOTHESIS NO. 7 RE: ATTENTION TO THE THINKING PROCESS (TP)

Although it is commonly assumed that the major purpose of public education is the improvement of the students' ability to think, only a small fraction of a teacher's time is devoted to the improvement of his pupils' thinking. For less than 2 percent of the time was the teacher deliberately helping students to improve the quality of their thinking.

There is considerable evidence that teachers will modify their classroom behavior to provide more attention to the thinking process when they become aware of how little time they devote to it. It is also possible that the delegation of some activities to another person will permit the kind of careful planning which is needed to enable the teacher to function in this, the highest professional role.

CONCLUSION

While the problems of role differentiation were not a primary consideration in the designing of the study of teacher classroom activity, the results would appear to have some relevance. It would seem that such an analysis could be the starting point of any attempt to differentiate teaching roles.

This simple way of taking a look at what teachers actually do may be a precondition for improving their professional behavior. The completed profile, with such notes as are made, constitutes a sequential account of the major activities in which the teacher engages during the class session. The Teacher Classroom Activity Profile has been an effective instrument in defining the role of the supervising teacher insofar as it helps reconstruct the teaching act and makes it subject to analysis and evaluation. The instrument tends to sharpen perception rather than interfere with it and provides a point of departure for the examination of alternative actions. The TCAP is used to report rather than evaluate teacher classroom behavior. No hierarchy of values was preassigned to the seven categories, although a value system is implicit. Student teachers are encouraged to ask themselves if this is the way they want to spend their class time and to create other, alternative patterns of behavior.

This preliminary analysis of the findings does seem to suggest a fruitful field of study for those who are concerned with role differentiation.

While there is no assurance that the provision of other personnel to perform some of the tasks which teachers currently perform would automatically result in an increased emphasis on the quality of thinking in the classroom, it might well provide the necessary conditions.

The redirection of teacher education, both preservice and in-service, is necessary if teachers are to become true professionals who help children learn to learn and learn to think.

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APPENDIX

PRELIMINARY NOTES ON TEACHER CLASSROOM ACTIVITY PROFILE (TCAP)

Donald M. Sharpe

August 1967

RATIONALE

The Teacher Classroom Activity Profile (TCAP) has been developed to serve two complementary purposes: first, to improve the quality of supervision, and second, to provide objective data for research on teacher behavior. (Basic Research USOE No. 6-1321.)

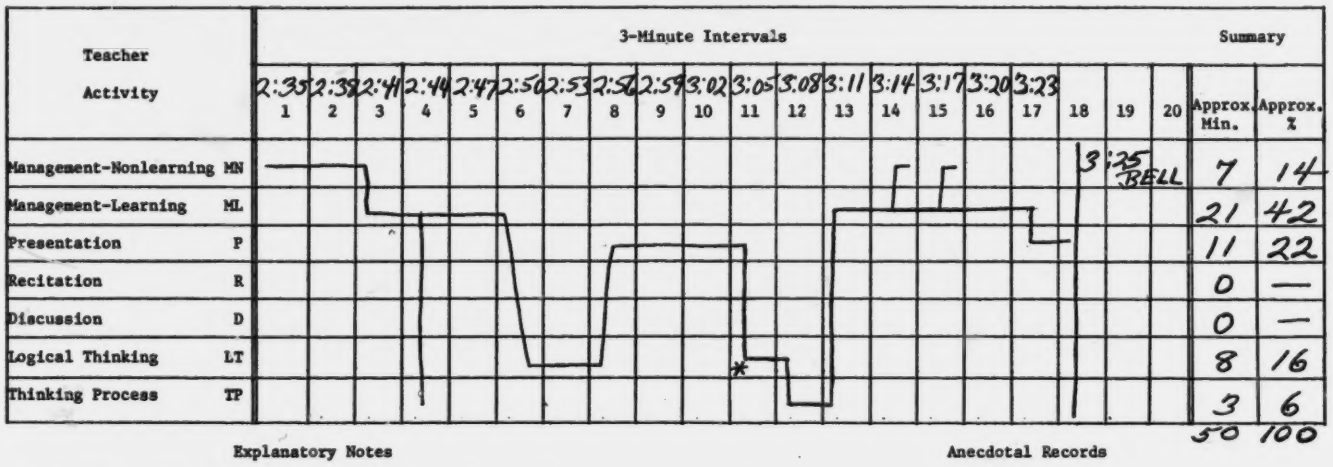
The Teacher Classroom Activity Profile is printed in two forms: the 8x11" no-carbon-required triplicate Form B (see the example on page 14), and the IBM card Form C. The NCR Form B will generally be used in observations -- one copy (yellow) for the student teacher, one copy (white) for the Division of Teaching, and one copy (pink) for the departmental supervisor. The IBM card will be used for key-punching, filing, and research purposes.

The TCAP has been found to be an effective instrument for helping supervisors and cooperating teachers record a student teacher's classroom behavior for subsequent analysis and evaluation. An observer can acquire the necessary skill in a relatively short time. The instrument actually sharpens perception rather than interferes with it. The completed profile provides data which enables the student and supervisor to "reconstruct the experience" and examine the effectiveness of the teaching acts and consider alternatives. The completed profile constitutes a sequential account of the major activities in which the teacher engages during the class session.

TEACHER CLASSROOM ACTIVITY PROFILE
TCAP FORM B

I.S.U. DIVISION OF TEACHING, 1966

STUDENT TEACHER Sandra Blank DATE 12-14
CLASS English-V TYPE Academic SUPERVISOR Sharpe
SUPERVISING TEACHER Mrs. Jones



Explanatory Notes

1-3 Distributed corrected themes individually - without comments.
3-6 Allowed time to read her comments.
7-8 Responded to questions about marks — Good.
8-11 Informal introduction to the "Short Story."
12 Discussion of values — "good and bad."
13-17 Study time.
17 Two minutes for assignment.

Anecdotal Records

* Good response to pupil who asked why he should study short stories.
4 Good question.
14-15 Reprimanded pupils.
← Teacher played role of umpire.
13-17 Teacher walked around room — Good.

The report is nonnormative, although the observer does have to make judgments in categorizing the teacher's behavior. In contrast with the Secondary Student Teacher Performance Profile (SSTPP), it is not an evaluative instrument. Since extensive training and controlled conditions are required for satisfactory use of the SSTPP, its use is restricted to the staff of the Division of Teaching who are participating in the research study. The TCAP focuses directly on what the teacher does and only indirectly on what the pupils do.

INSTRUCTIONS FOR USE OF THE TCAP

The observer records a continuous line moving among the seven major activities in 3-minute intervals. Explanatory notes should be keyed to the column numbers which indicate the sequence of 3-minute intervals. If there is just a momentary shift in categories, a vertical line going up or down to the proper category should be made without interruption of the general flow of the regular profile graph.

For instance, if a teacher interrupts a presentation to reprimand a student or to ask for attention, since this activity is classified as management-nonlearning (MN), a line would go up to the section on management-nonlearning (MN); or similarly, if the teacher is conducting a recitation and stops a moment to ask a question which provokes thinking and then goes on with the recitation, a line would drop down to the section on logical thinking (LT). For summary purposes, count four such lines as the equivalent of one minute. If this activity goes on for a minute or more, the graph should show it as a part of the continuous line. It is possible to indicate 1- or 2-minute sequences by using one-third or two-thirds of the space.

It has been found helpful to indicate the time of day at each of the 3-minute intervals, starting in Column 1 with the minute the class starts and then recording the time at 3-minute intervals after that in the numbered squares. The total number of minutes should, of course, add up to the total spent in observation. The percentages should be computed approximately, to the nearest percent. Percentages should tally to 100. A table to facilitate this computation is available in _____ office.

The NCR paper makes it possible for the observer to provide the student with a copy of the analysis. The left-hand column, "Explanatory Notes," should be used to describe any unusual movement of the profile or to identify something that happened that might be discussed. The righthand section, "Anecdotal Records," could be used to make evaluative judgments, jot down ideas, or make suggestions that may be helpful to the student. Some of the staff have found it helpful to mark an X in the appropriate cateogry at the time an opportunity to help pupils improve their thinking was missed.

TCAP forms should be completed, including the summary computation, and returned to the Research Office of the Division of Teaching at the end of each platoon. Be sure to include identification data -- student and observer.

DEFINITIONS OF MAJOR CATEGORIES

While the terms used to identify the seven categories of teacher activity carry common connotations, their use in this study is restricted to the precise meanings as defined and illustrated below. The definitions and examples serve as a basic point of reference. The precise distinctions among the various categories are clarified in staff

discussions and individual conferences. The TCAP can be used in both academic classes and laboratory or shop-type classes; however, the precise meaning of the categories would differ.

The following definitions apply to academic-type classes, e.g., English, social studies, mathematics, science other than science laboratories.

MN Management-Nonlearning. Management of classroom in a situation where the teacher is not attempting to teach, e.g., reading announcements, taking roll, distributing materials, having idle time, disciplining pupils, waiting for the bell to ring.

ML Management-Learning. Management of classroom in a situation where learning may occur but the teacher is not involved except in a managerial role, e.g., showing a film, administering a written examination, supervising study time, hearing student reports.

P Presentation. The presentation of subject matter by the teacher in some organized fashion, e.g., lectures, demonstrations, illustrated talks, blackboard presentations, reading.

R Recitation. The solicitation of student responses which call for terse memorized data, oral testing to determine if assignments have been read, review questions, etc.

D Discussion. Random discussion involving student-teacher interaction but without analysis or synthesis. "Stream-of-consciousness" discussion without any apparent focus or purpose except to consume time until the period is over, e.g., "talk, talk, talk." When discussion does

come to a focus, it fits into the next category, logical thinking.

LT Logical Thinking. Discussion which involves analysis and synthesis. The teacher is deliberately encouraging or permitting thinking to occur. This category is more than reciting or repeating something which has been learned or memorized. When the teacher acts to encourage thinking, it should be recorded here, whether or not the act is successful. (Use vertical lines to this category when a brief interval of thinking occurs in presentations, recitations, or discussion.)

TP Thinking Process. Deliberate, conscious attention on the part of the teacher to the intellectual process, e.g., pointing out to students the factual or logical basis of their thinking, pointing out errors in reasoning, examining the reliability and validity of evidence, examining the adequacy of the sample, defining terms, checking assumptions, examining the scientific method, examining values, seeking reason for conflicting opinions, locating the source of difficulty, examining the "method of inquiry." (Use explanatory notes to report good examples. Put an X on the profile if an opportunity to contribute to the thinking process is missed.)

The following modifications apply to laboratory-type classes -- e.g., science laboratory, shop, band, orchestra, physical education, typing.

MN Management-Nonlearning. Basically the same as for academic. Include clean-up and waste time. Record here the time in which the teacher ignores pupils to work on outside activities.

ML Management-Learning. Basically the same as for academic. Warm-up time, showering, dressing.

P Presentation. Same as for academic.

R Recitation. Same as for academic. Include drill and practice time in this category, review exercises, supervised practice.

D Discussion. Same as for academic.

LT Logical Thinking. Consider all purposeful work which the teacher is actively supervising or directing in this category.

TP Thinking Process. Same as for academic. This category applies if the teacher is working with a single pupil, a group, or the total class.

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